



Ion Source with Low Turn-On Delay, Jitter

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The Wisconsin Alumni Research Foundation is seeking commercial partners interested in an ion source capable of short turn-on delays of one microsecond or less with low delay variability (i.e., jitter). The device enables high frequency ion beam applications in processes including plasma processing, surface modification, film deposition, plasma thrusters, bomb detection and material analysis.

The Invention

UW-Madison researchers have developed a plasma ion source that exhibits a short delay between voltage application and ion beam initiation with low variance in the observed delay (i.e., jitter). Typical delay times observed with other plasma ion sources can be about 2 milliseconds, limiting the maximum frequency of pulsed ion beams. The novel ion source can provide turn-on delays around one microsecond or less with reduced jitter through the incorporation of a seed plasma. This device enables applications requiring ion beams with high pulse frequencies and narrow pulse widths.

Tech Fields

- [Analytical Instrumentation, Methods & Materials : General analytical instrumentation](#)
- [Analytical Instrumentation, Methods & Materials : Sensors](#)

For current licensing status, please contact Michael Carey at mcarey@warf.org or 608-960-9867